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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,470	10/22/2003	Don Kennard	NOBELB.063DV1	5956

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EXAMINER	
SINGH, SUNIL K	

ART UNIT	PAPER NUMBER
3732	

NOTIFICATION DATE	DELIVERY MODE
08/13/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
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Office Action Summary	Application No.	Applicant(s)	
	10/691,470	KENNARD, DON	
	Examiner	Art Unit	
	Sunil K. Singh	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 June 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *39-57 and 62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *39-57 and 62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 06/08/2009 has been entered.

Claim Objections

2. Claim 39 objected to because of the following informalities: The Examiner believes the amendments to the claim should read "said torque segment comprising at least one flat surface **on** an outer surface of the torque segment. Appropriate correction is required.

Claim Rejections - 35 USC § 102

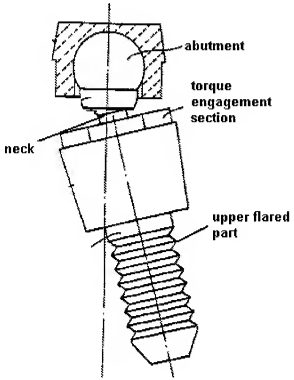
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 39,40,43,44,48,56,57 and 62 are rejected under 35 U.S.C. 102(b) as being anticipated by Nardi et al. (US 5,520,540).

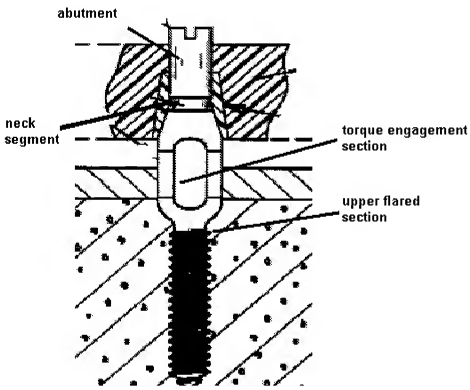
Nardi discloses a dental implant that includes: an abutment (4) that is capable of being adapted with a dental prosthesis; a flexible neck segment (where 2a points at in Figure 2 and where 1 points at in Figure 5) connected to the abutment (Fig. 5); a body segment (10) connected to the flexible neck segment (Fig.5); the body segment (10) having threads extending helically about the implant axis, the thread diameter tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end (Fig. 5); a torque engagement segment (11) that is capable of being configured to engage a torque-imparting tool; wherein the torque segment comprises a plurality of flat surfaces on an outer surface of the torque segment (Fig. 5); wherein the threaded body segment (10) comrprises an upper flared section proximal to the neck portion (Fig. 5 that is reproduced below); an intermediate section and a tapered lower section distal from the neck segment (Fig. 5); the lower section having a smaller angle of taper as compared to the upper section (Fig. 5) (note that the claims do not call for a tapered upper portion); wherein the neck section is more narrow than both of the upper flared section of the body segment and the abutment (Fig. 5); wherein the neck segment has a plurality of flat facets on the outer surface (Fig. 2); wherein the threads of the intermediate section of a constant diameter (Fig. 5); wherein the length of the body segment is approximately equal to the thickness of the cortical layer of the bone.



5. Claims 39,40,43,44,48,56,57 and 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Morgan (WO 99/29256).

Morgan discloses a dental implant that includes: an abutment (50) that is capable of being adapted with a dental prosthesis; a flexible neck segment (Fig. 6 that is reproduced below) connected to the abutment (Fig. 6); a body segment (14) connected to the flexible neck segment (Fig.6); the body segment (14) having threads extending helically about the implant axis, the thread diameter tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end (Fig. 1); a torque engagement segment (11) that is capable of being configured to engage a torque-imparting tool; wherein the torque segment comprises a plurality of flat surfaces (18) on an outer surface of the torque segment (Fig 1) (page 5, lines 30-33); wherein the

threaded body segment (14) comrprises an upper flared section proximal to the neck portion (Fig. 6 that is reproduced below); an intermediate section and a tapered lower section distal from the neck segment (Fig. 6); the lower section having a smaller angle of taper as compared to the upper section (Fig. 1) (note that the claims do not call for a tapered upper portion); wherein the neck section is more narrow than both of the upper flared section of the body segment and the abutment (Fig. 5); wherein the neck segment has a plurality of flat facets on the outer surface (Fig. 6); wherein the threads of the intermediate section of a constant diameter (Fig. 1); wherein the length of the body segment is approximately equal to the thickness of the cortical layer of the bone.



Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 41,42,45-47,49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan in view of Bauer (US 5,074,790).

Morgan discloses the invention substantially as claimed except for a device that includes: thread diameter is within the range of 1-3mm; threads of the upper flared section that define a taper angle between about 6 and 14 degrees and between 3 and 7 degrees; wherein the neck segment has a length greater than 5 mm; wherein the body segment is about 12 mm in length; wherein the total length along the implant axis is greater than 20 mm.

Bauer teaches an implant having thread diameters within the range of 1-3 mm (column 4, line 16). It would have been obvious to one having ordinary skill in the art to modify Morgan to include the thread diameter range as taught by, Bauer, since such a diameter range is well known in the art. It also would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Morgan to include a flared section with the various claimed ranges of angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233. Furthermore, it would have been obvious to one having ordinary skill in the

art at the time the invention was made to modify Morgan to include a body/neck segment and a total implant length at the various claimed values; since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

8. Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan in view of Christensen (US 3,466,748).

Morgan disclose a dental implant that shows the limitations as described above; however, Morgan does not show the thread depth tapering and wherein the maximum thread depth is between about 0.5 mm and 0.7 mm and wherein the pitch is 0.8mm to 1.8mm.

Christensen shows a dental implant having a thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the thread depth of Christensen in order to increase stability and decrease patient trauma in view of Christensen. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific depth and pitch of the body segment. Furthermore, to modify Morgan/Christensen to include a thread depth and pitch having the claimed ranges would have been obvious to one having ordinary skill in the art, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233.

9. Claims 41,42,45-47,49-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nardi in view of Bauer (US 5,074,790).

Nardi discloses the invention substantially as claimed except for a device that includes: thread diameter is within the range of 1-3mm; threads of the upper flared section that define a taper angle between about 6 and 14 degrees and between 3 and 7 degrees; wherein the neck segment has a length greater than 5 mm; wherein the body segment is about 12 mm in length; wherein the total length along the implant axis is greater than 20 mm.

Nardi teaches an implant having thread diameters within the range of 1-3 mm (column 4, line 16). It would have been obvious to one having ordinary skill in the art to modify Nardi to include the thread diameter range as taught by, Bauer, since such a diameter range is well known in the art. It also would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nardi to include a flared section with the various claimed ranges of angles, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Nardi to include a body/neck segment and a total implant length at the various claimed values; since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

10. Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nardi in view of Christensen (US 3,466,748).

Nardi disclose a dental implant that shows the limitations as described above; however, Nardi does not show the thread depth tapering and wherein the maximum thread depth is between about 0.5 mm and 0.7 mm and wherein the pitch is 0.8mm to 1.8mm.

Christensen shows a dental implant having a thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end (Fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the thread depth of Christensen in order to increase stability and decrease patient trauma in view of Christensen. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific depth and pitch of the body segment. Furthermore, to modify Nardi/Christensen to include a thread depth and pitch having the claimed ranges would have been obvious to one having ordinary skill in the art, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233.

Response to Arguments

11. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892 Form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil K. Singh whose telephone number is (571) 272-3460. The examiner can normally be reached on Monday-Friday (Increased Flex Schedule).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris L. Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/05/209

/Sunil K Singh/
Examiner, Art Unit 3732

/Ralph A. Lewis/
Primary Examiner, Art Unit 3732